

INTERNATIONAL SEARCH REPORT

Inte...al Application No

PCT/JP2004/015564

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L51/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Y. CAO ET AL.: "Improved quantum efficiency for electroluminescence in semiconducting polymers" NATURE, vol. 397, 4 February 1999 (1999-02-04), pages 414-417, XP008043621 MACMILLAN JOURNALS, LONDON, GB abstract page 415, column 2, paragraph 2 - page 416, column 1, paragraph 2 figure 2 ----- -/-	1-4, 6-13
A		5

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :	<ul style="list-style-type: none"> °A° document defining the general state of the art which is not considered to be of particular relevance °E° earlier document but published on or after the international filing date °L° document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) °O° document referring to an oral disclosure, use, exhibition or other means °P° document published prior to the international filing date but later than the priority date claimed
Date of the actual completion of the international search	Date of mailing of the International search report
24 February 2005	07/03/2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Paisdor, B

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1 179 558 A (NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY; DAIN) 13 February 2002 (2002-02-13) cited in the application abstract; figures 2-5 paragraph '0065! paragraph '0074! - paragraph '0092! -----	1-13
Y	YANG K ET AL: "Effects of alternate doped structures on organic electroluminescent devices" PREPARATION AND CHARACTERIZATION, ELSEVIER SEQUOIA, NL, vol. 408, no. 1-2, 3 April 2002 (2002-04-03), pages 206-210, XP004351364 ISSN: 0040-6090 page 206, column 2, paragraph 2.; figure 1 -----	1-13
X	EP 1 220 341 A (KABUSHIKI KAISHA TOSHIBA) 3 July 2002 (2002-07-03) abstract; figure 1 -----	1-4,6-13
Y	page 12 - page 15; examples -----	5
X	EP 1 143 773 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) 10 October 2001 (2001-10-10) abstract; figures 1,4 paragraph '0237! - paragraph '0245! paragraph '0180! - paragraph '0223! -----	1-4,6-13
X	FUJII A ET AL: "EMISSION ENHANCEMENT IN ELECTROLUMINESCENT DIODE UTILIZING POLY(3-ALKYLTHIOPHENE) DOPED WITH OXADIAZOLE DERIVATIVE" JOURNAL OF PHYSICS D. APPLIED PHYSICS, IOP PUBLISHING, BRISTOL, GB, vol. 28, no. 10, 14 October 1995 (1995-10-14), pages 2135-2138, XP000543465 ISSN: 0022-3727 page 2135, paragraph 2. - page 2136; figure 1 page 2137, column 2 -----	1-4,6-13
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CHUNG S-J ET AL: "HIGHLY EFFICIENT LIGHT-EMITTING DIODES BASED ON AN ORGANIC-SOLUBLE POLY(P-PHENYLENEVINYLENE) DERIVATIVE CARRYING THE ELECTRON-TRANSPORTING PBD MOIETY" ADVANCED MATERIALS, VCH VERLAGSGESELLSCHAFT, WEINHEIM, DE, vol. 10, no. 14, 1 October 1998 (1998-10-01), pages 1112-1116, XP000781875 ISSN: 0935-9648 the whole document -----	1-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	Publication date		Patent family member(s)	Publication date
EP 1179558	A	13-02-2002	JP 2000281821 A EP 1179558 A1 WO 0058391 A1 US 2004195206 A1	10-10-2000 13-02-2002 05-10-2000 07-10-2004
EP 1220341	A	03-07-2002	EP 1220341 A2 JP 2002280183 A US 2002106531 A1	03-07-2002 27-09-2002 08-08-2002
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